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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/720,999	02/15/2001	Dieter Carstens	P00,1899	3133

7590 07/02/2004  
Schiff Hardin & Waite  
6600 Sears Tower  
Chicago, IL 60606

EXAMINER

LEE, TOMMY D

ART UNIT	PAPER NUMBER
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2624

DATE MAILED: 07/02/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/720,999

Applicant(s)

CARSTENS, DIETER

Examiner

Thomas D. Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 03 January 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 11-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11,17-19,22 and 24 is/are rejected.
- 7) ☒ Claim(s) 12-16,20,21 and 23 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>5</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11, 18, 19, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 3,964,382 (Baar et al.) in view of U.S. Patent 3,546,586 (Stimson et al.).

Regarding claim 11, Baar et al. disclose an engraving element of an electronic engraving machine for engraving printing forms, comprising: a shaft oscillating around a longitudinal axis with small rotational angles (rotary system comprises shaft (column 4, lines 62-64)); a drive system for the shaft (electromagnet comprising U-shaped sheet metal packages, coil positioned in recess and connected to control current (column 4, lines 52-61)); a lever attached to an end of the shaft with an engraving stylus for engraving the printing form (lever with attached engraving tool or needle (column 5, lines 2-5)); a restoring element for the shaft (torsion rod connected in recess of frame member (column 4, line 67-column 5, line 2); a damping mechanism for the shaft having a damping element secured to the shaft as well as a stationary damping chamber filled

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with a damping medium connected to the shaft via a bearing (circular disk attached to shaft, annular stationary chamber surrounding shaft and filled with damping medium (column 6, lines 17-21) connected to the shaft via a bearing (column 4, lines 64-67)); the damping element being formed of at least one damping disk that is circular at least in regions and extending perpendicular to the shaft (disk 22 shown as being circular (Fig. 5)); the damping chamber being designed at least as a hollow-cylindrical segment around the shaft into which the damping disk projects (chamber 23 shown to be hollow and cylindrical in shape around shaft, into which disk projects (Fig. 5)); and the damping chamber extending at least over the circular regions of the damping disk (chamber extends over disk (Fig. 5)).

The damping mechanism used by Beer et al. is preferably grease (column 6, lines 18-21), which is not a ferro-fluidic fluid. However, the use of a ferro-fluidic fluid in a damping element is well known in the art. Stimson et al. disclose the use of magnetic fluid for damping. The ferromagnetic particles of the fluid cause different portions of the fluid to rotate with a moving magnet in order to provide damping (column 2, line 68-column 3, line 1). Stimson et al. noted disadvantages in the use of fluid damping, including the fact that the fluid may leak out of its container (i.e., chamber) and might cause damage to the instrument requiring damping, and that fluid damping arrangements are, in many cases, cumbersome and relatively expensive (column 1, lines 39-43). Stimson et al. further notes that the characteristics of the ferromagnetic fluid are such that the application of a magnetic field will exert force on the fluid without changing the fluid's characteristics (column 2, lines 64-67), and thus the use of the

ferromagnetic fluid would provide an advantage over the use of grease, whose characteristics change over the course of time, thereby reducing the effectiveness of the damping element. Therefore, it would have been obvious for one of ordinary skill in the art to modify the teaching of Beer et al. by using a ferro-fluidic fluid and magnet combination, as disclosed in Stimson et al.

Claim 19 recites the limitations of above-rejected claim 11, minus the drive system, lever with engraving stylus, restoring element and bearing. The remaining limitations are disclosed in the combined teaching of Baar et al. and Stimson et al., as set forth above.

Claim 24 recites the damping mechanism comprising nothing more than the elements recited in above-rejected claim 11. These elements are disclosed in the combined teaching of Baar et al. and Stimson et al., as set forth above.

Regarding claims 18 and 22, the bearing disclosed in Baar et al. is not described as having a flexible member. However, it would have been obvious to one of ordinary skill in the art to provide a bearing with a flexible member. Applicant has not disclosed that providing a bearing with a flexible member provides an advantage, is used for a particular purpose or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either the bearing disclosed in Baar et al. or the claimed bearing with a flexible member because both bearings perform the same function of supporting the shaft and its armature for rotation. Therefore, it would have been obvious to provide a bearing with a flexible member in the device disclosed in Baar et al. as specified in claim 18.

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4. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baar et al. in view of Stimson et al. as applied to claim 11 above, and further in view of U.S. Patent 5,816,756 (Flohr et al.).

The combined teaching of Baar et al. and Stimson et al. does not disclose a drive system designed as one of a piezoelectric and a magnetstrictive drive element. Flohr et al. disclose an engraving printer that uses a piezoelectric drive connected electrically to a drive control, for bearing an engraving head on an intaglio cylinder (column 3, lines 43-45). One of ordinary skill in the art, in view of Flohr et al., would have recognized that using a piezoelectric drive element would work effectively as an alternative to the drive system disclosed in Baar et al., and thus it would have been obvious for one of ordinary skill in the art to modify the combined teaching of Baar et al. and Stimson et al., by providing a drive system designed as a piezoelectric drive element.

***Allowable Subject Matter***

5. Claims 12-16, 20, 21 and 23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: No prior art has been found to disclose or suggest a damping mechanism that is not rotationally symmetrical relative to an axial direction of the shaft, as recited in claims 12 and 20; or a damping element provided with through holes proceeding in an axial direction of the shaft, as recited in claims 13 and 21; or a bearing connected to the

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shaft comprising a spoke bearing, as recited in claim 14; or a flexible bearing having spring spokes, as recited in claim 23. Claims 15 and 16 depend from claim 14.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Lee whose telephone number is (703) 305-4870. The examiner can normally be reached on Monday-Friday (7:30-5:00), alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David K. Moore can be reached on (703) 308-7452. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Thomas D. Lee  
Primary Examiner  
Art Unit 2624

tdl  
June 25, 2004